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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,561	02/19/2002	Jin Gyo Seo	1293.1322	1466

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EXAMINER	
PSITOS, ARISTOTELIS M	
ART UNIT	**PAPER NUMBER**
2653	

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/076,561	SEO, JIN GYO	
	Examiner	Art Unit	
	Aristotelis M Psitos	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/17/03 & 6/21/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Information Disclosure Statement

The submitted IDS documents have been reviewed and made of record.

The disclosure is objected to because of the following informalities: no support is seen in the remainder of the specification for the terminology recited in claim 26. Similarly the examiner cannot map this claim to any of the figures. Appropriate correction is required.

Claim Objections

Claim 9 is objected to because of the following informalities: This claim has an end of bracket symbol after the word "pulses" in the second line. Appropriate correction is required.

Claims 27-41 recite in their introductory phrase "a method of" in an optical recording apparatus. The question is a "method" of what? The examiner recommends inserting --- recording --- after the phrase "a method of ".

Claim 28 is objected to because it recites a desired result predicated upon a parameter, length which has no positive step of being either determined/detected/established, hence it is incomplete.

Claim 40 recites limitations that the examiner cannot map to the remainder of the specification/drawings. Further explanation is respectfully requested.

Claims 43-48 are objected to for failing to further limit their respective parent claim.

These claims all recited desired results that do not follow from the structure, elements positively recited in the parent claim, i.e., the controller. The claim is not written in proper means plus function language. These claims merely recite desired results.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The examiner cannot reconcile the claimed limitation with the remainder of the specification. Furthermore, even if such terminology were inserted to provide support for such (see the above noted objection to the disclosure), such inclusion would still be deficient since no disclosure with respect to "a reference" is described.

Claim 27 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a mutli pulse chain generating ability for recording in an optical system so as to maintain/establish proper power levels, more than 1 step is disclosed. That is, the specification does not reasonably provide enablement for a single step. Applicant's attention is drawn to ***O'Reilly v. Morse, 56 US 62 at pg 48*** with respect to single step claims. The examiner interprets claim 27 as a single step.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 14, rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 14, line 2 recites a "plurality of third pulses". This is not understood, since a plurality refers to more than 1. Hence how can more than 1 pulse be called a "third pulse"?

With respect to claim 37, the examiner cannot follow this negative limitation. Further elaboration/explanation as well as mapping of such to the remainder of the specification is respectfully requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 8-12,14-25 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2000-215449.The US patent equivalent 6480450 is sent as an English translation thereof.

With respect to method claim 8:	US 6480450:
Setting a recording mode ...	see the discussion with respect to starting at col. 3 line 15 to col. 4 line 14, which describes
Depending on the type of.. generating multi pulse chain having at least two different widths,	the setting of a record mode, predicated upon various parameters and at col. 4 line 15 to col. 7 line 20 for the multi pulse chain with at least two different widths,
generating .. first pulse, multi-pulse chain, last pulse	the first and last pulse are so established.

With respect to claim 9 the controller permits such determination.

With respect to claim 10, CAV is so identified – see col. 3 lines 50-53.

With respect to claim 11, such power multi-chain generation is normally performed during Initialization – i.e., to establish proper power levels for subsequent recording.

With respect to claim 12, see the above analysis with respect to claim 8. Claim 12 lacks the depending limitation, however, the remaining limitations are present.

With respect to claims 14,15,16,17,18,and 19 see the description of figure 4c with respect to the pulse chain for 10T, 11T or 14T.

With respect to claim 20, obviously information is received by the above system in order to generate the multi pulse chain.

With respect to claim 21, different types of discs are discussed see col. 4 lines 1-5.

With respect to claim 22, see col. 3, lines 50-53 for CAV, CLV for example.

With respect to claims 23,24,25 see figure 4c and the various multi pulse chains therein.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 12 as stated above, and further in view of either the acknowledged prior art of figure 1a/b or Ichimura.

Although the pulse widths of the multi pulse chain in the primary reference vary appropriately, they are not necessarily narrower than the last pulse. Nevertheless, as established/acknowledged by applicant appropriate lengths of the last pulse is known, the acknowledged prior art of either figures 1a and b (appropriate identification of such is respectfully requested in order to complete the search report). Alternatively, Ichimura as noted in figure 1 also depicts TSLP wherein the pulse widths of the multi pulse chain are narrower.

It would have been obvious to modify the base system of JP 2000-215449 with the above additional teaching from either the acknowledged prior art, Ichimura since as noted in the primary reference, the length of the last pulse is appropriately established in order to permit proper pit formation upon the record medium.

AS FAR AS CLAIMS 27-41 are interpreted, the following rejections are made.

5. Claims 27 – 41 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2000-215449.The US patent equivalent 6480450 is sent as an English translation thereof.

With respect to claim 27,

The JP document/US equivalent discloses a method in an optical recording/reproducing apparatus/environment in which a multi pulse chain is prepared appropriately to generate as depicted in figure 4c for instance. The various pulses are depicted therein.

With respect to claim 28, as interpreted by the examiner, the recording pulse is appropriately generated, i.e., greater than a minimum length. The examiner respectfully requests applicant's assistance to map this terminology with the remainder of the specification and figures so as to ensure proper interpretation.

With respect to claims 29 and 30, the examiner interprets this claim as attempting to define a second recording pulse set – which is met by either the second pulse set in the 10T, 11T or 14T depicted in figure 4c.

With respect to claims 31,33-36, the examiner interprets this claim as attempting to define a first and second recording pulse set and again these are depicted in figure 4c in the above noted document.

With respect to claims 32 and 38, the examiner interprets such as being NRZI format. Alternatively, if such were not inherently present, then the examiner would rely upon the acknowledged prior art (further identification as to such is respectfully requested from applicant to complete the search report).

It would have been obvious to modify the base system of 2000-215449 with the well-known format, motivation is to use existing formats in this environment and hence provide for a backward compatible recording ability.

With respect to claim 33, see figure 4c and its disclosure. With respect to the CAV ability, see col 3 lines 50-53.

With respect to claim 33, the examiner interprets this as attempting to define a second recording pulse set. As such, see the description of 10T, 11T or 14T in figure 4c.

With respect to claims 35-36 – see the description of figure 4c and the CAV limitation already noted above.

With respect to claims 39-40,41, the examiner interprets such as the CAV recording ability described in the above noted figure 4c. Note that the heights of the pulses are the same.

6. Claims 1-7 and 42-48 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2000-215449.The US patent equivalent 6480450 is sent as an English translation thereof.

. With respect to apparatus claims 1 and 42, the recording pulse generator is interpreted as element 27, which generates pulses, in response to appropriate instructions/controls from elements 26 and 25. See the discussion starting at col. 3 line 23 to col. 4 line 14 as well as the description of the multi pulse chain as further depicted in figure 4c.

With respect to claim 2, see the description of figure 4c, 10T, 11T, and 14T.

With respect to claims 3 and 46, the CAV ability is found at col. 3 lines 50-53.

With respect to claim 4, this multi pulse chain is established during an initialization of the record medium so as to record the information at the proper signal/power level. Hence the examiner interprets the initialization limitation of claim 4 as inherently present.

With respect to claim 5, the examiner interprets such as being NRZI format. Alternatively, if such were not inherently present, then the examiner would rely upon the acknowledged prior art (further identification as to such is respectfully requested from applicant to complete the search report).

It would have been obvious to modify the base system of 2000-215449 with the well-known format, motivation is to use existing formats in this environment and hence provide for a backward compatible recording ability.

With respect to claims 6 and 7, the reference permits variable value pulse widths as required.

With respect to claims 43 & 44, third pulses are appropriately inserted.

With respect to claim 45, see col. 4, lines 1-14 for instance.

With respect to 47, the multi pulse chain is generated when the appropriate domain is greater than a reference. No reference is established, hence the pulse chain generated in the reference when required, i.e., above the recording signal level.

With respect to claim 48, the examiner interprets this to refer to CAV formatting ability. See the above discussion with respect to claims 3 and 46 for such.

Conclusion

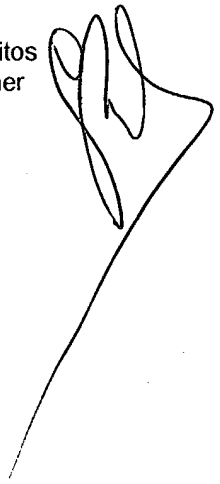
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
Asada et al – see description of the multi pulse chain in figures 7,26, 36.
Seo – see the description of figures 1a-e, 2a-e, 3a-3e and 5a-e. Seo could be relied upon in place of the primary reference to JP 2000-215449 in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
Art Unit 2653



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